



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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APPROVAL FOR REMEDIAL USE
Pursuant to Title 5, 310 CMR 15.000

Trade name of technology and model number: Recirculating Sand Filter designed in accordance with Department guidance (hereinafter the "System")

Date of Issuance:	March 24, 1995
Modified:	November 2, 1998
Effective date:	November 2, 1998
Expiration date:	November 2, 2003

Authority for Issuance

Pursuant to Title 5 of the State Environmental Code, 310 CMR 15.000, the Department of Environmental Protection hereby issues this Approval for Remedial Use in the Commonwealth of Massachusetts of the System described herein. Use of the System is conditioned on and subject to compliance by the System owner/operator with the terms and conditions set forth below. Any noncompliance with the terms or conditions of this Approval constitutes a violation of 310 CMR 15.000.

Lealdon Langley, Acting Program Director
Watershed Permitting Program
Department of Environmental of Environmental Protection

Date

This information is available in alternate format by calling our ADA Coordinator at (617) 574-6872.

DEP on the World Wide Web: <http://www.magnet.state.ma.us/dep>

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I. Design Standards

1. The System has a recirculation tank and pump, and an underdrained open sand filter. Effluent from the septic tank is collected in the recirculating tank, where it is mixed with the effluent returned from the sand filter. The mixture is periodically pumped onto the sand filter and evenly distributed over the filter surface. A drain line, at the bottom of the sand collects the sand filter effluent and returns it by gravity to the recirculating tank (or if the tank is full, to the pump chamber). A Massachusetts registered professional engineer or registered sanitarian may design a System.
2. **This Remedial Use Approval authorizes the use of the System where the local approving authority finds the following: a) that the System is for upgrade of a failed, failing or nonconforming system, and b) the design flow for the facility is less than 10,000 gallons per day, and there is no increase in design flow to be served by the System. The System, as approved in this Remedial Use Approval, cannot be used for new construction or where there is an increase in design flow.**
3. The System shall be installed between the septic tank and the pump chamber of a standard Title 5 system constructed in accordance with 310 CMR 15.100 - 15.279, subject to the provisions of this Approval.
4. The System may be used in soils with a percolation rate of up to 90 min./inch. For soils with a percolation rate of 60 to 90 min./inch, the effluent loading rate shall be 0.15 gpd / sq.ft.
5. The System must be designed in accordance with the Department's guidance on Recirculating Sand Filters.

A. Reduced Soil Absorption System

In approving design and installation of the System by a particular owner/operator, the local approving authority may allow a reduction, no greater than 50%, in the area of the soil absorption system required by 310 CMR 15.242, provided that all of the following conditions are met:

1. Unless a reduction is approved by the Department pursuant to 310 CMR 15.284, no reduction in the required separation (four feet in soils with a recorded percolation rate of more than two minutes per inch or five feet in soils with a recorded percolation rate of two minutes or less per inch) between the bottom of the stone underlying the soil absorption system and the high groundwater elevation is allowed.
2. Unless a reduction is allowed by a variance approved by the local approving authority and the Department pursuant to 310 CMR 15.410 et seq., or the local approving authority has allowed a reduction under a local upgrade approval pursuant to 310 CMR 15.405 (1) (a), (b), (f), (g), and (h), the setbacks from property line, cellar wall, swimming pool, slab foundation, public or private wells, bordering vegetated wetlands, surface waters, salt marshes, coastal banks, certified vernal pools, water supply lines, surface water supplies or tributaries to surface water supplies, or drains which discharge to surface water supplies or their tributaries shall comply with the distances in 310 CMR 15.211.

3. Unless a reduction is approved by the Department pursuant to 310 CMR 15.284, no reduction in the required four feet of naturally occurring pervious material is allowed.

B. Reduction of the Groundwater Separation Distance

In approving design and installation of the System by a particular owner/operator, the local approving authority may allow a reduction in the required separation (four feet in soils with a recorded percolation rate of more than two minutes per inch or five feet in soils with a recorded percolation rate of two minutes or less per inch) between the bottom of the stone underlying the soil absorption system and the high groundwater elevation, provided that all of the following conditions are met:

1. A minimum two foot separation (in soils with a recorded percolation rate of more than two minutes per inch) or a minimum three foot separation (in soils with a recorded percolation rate of two minutes or less per inch) between the bottom of the stone underlying the soil absorption system and the high groundwater elevation is maintained.
2. Unless a reduction is approved by the Department pursuant to 310 CMR 15.284, the soil absorption system size shall fully conform to the design standards in 310 CMR 15.242.
3. Unless a reduction is allowed by a variance approved by the local approving authority and the Department pursuant to 310 CMR 15.410 et seq., or the local approving authority has allowed a reduction under a local upgrade approval pursuant to 310 CMR 15.405 (1) (a), (b), (f), (g), and (h), the setbacks from property line, cellar wall, swimming pool, slab foundation, public or private wells, bordering vegetated wetlands, surface waters, salt marshes, coastal banks, certified vernal pools, water supply lines, surface water supplies or tributaries to surface water supplies, or drains which discharge to surface water supplies or their tributaries shall comply with the distances in 310 CMR 15.211.
4. Unless a reduction is approved by the Department pursuant to 310 CMR 15.284, no reduction in the required four feet of naturally occurring pervious material is allowed.

C. Reduction of the Requirement for four feet of Naturally Occurring Pervious Material

In approving design and installation of the System by a particular owner/operator, the local approving authority may allow a reduction in the required four feet of naturally occurring pervious material in an area with no less than two feet of naturally occurring pervious material, provided that all of the following conditions are met:

1. The Applicant has demonstrated that the four foot requirement cannot be met anywhere on the site, and that easements to adjacent property on which a system in compliance with the four foot requirement could be installed have been requested but cannot be obtained, and that a shared system is not feasible.

2. Unless a reduction is approved by the Department pursuant to 310 CMR 15.284, the soil absorption system size shall fully conform to the design standards in 310 CMR 15.242.
3. Unless a reduction is allowed by a variance approved by the local approving authority and the Department pursuant to 310 CMR 15.410 et seq., or the local approving authority has allowed a reduction under a local upgrade approval pursuant to 310 CMR 15.405 (1) (a), (b), (f), (g), and (h), the setbacks from property line, cellar wall, swimming pool, slab foundation, public or private wells, bordering vegetated wetlands, surface waters, salt marshes, coastal banks, certified vernal pools, water supply lines, surface water supplies or tributaries to surface water supplies, or drains which discharge to surface water supplies or their tributaries shall comply with the distances in 310 CMR 15.211.
4. Unless a reduction is approved by the Department pursuant to 310 CMR 15.284, no reduction in the required separation (four feet in soils with a recorded percolation rate of more than two minutes per inch or five feet in soils with a recorded percolation rate of two minutes or less per inch) between the bottom of the stone underlying the soil absorption system and the high groundwater elevation is allowed.

II. General Conditions

1. The Department has not determined that the performance of the System will provide a level of protection to public health and safety and the environment that is at least equivalent to that of a sewer. Accordingly, no new System shall be constructed and no System shall be upgraded or expanded, if it is feasible to connect the facility to a sanitary sewer, unless a variance as provided for in 310 CMR 15.004 is obtained.
2. Pressure distribution designed in accordance with Department guidance is required.
3. Any required operation and maintenance, monitoring and testing shall be performed in accordance with a Department approved plan. Any required sample analysis shall be conducted by a U.S. EPA or Commonwealth of Massachusetts approved testing laboratory, unless otherwise provided in the Department's written approval. It shall be a violation of this Approval to falsify any data collected pursuant to an approved testing plan, to omit any required data or to fail to submit any report required by such plan.
4. The facility served by the System, and the System itself, shall be open to inspection and sampling by the Department and the local approving authority at all reasonable times.
5. In accordance with applicable law, the Department or the local approving authority may require the owner of the System to cease use of the System and/or to take any other action as the Department or the local approving authority deems necessary to protect public health, safety, welfare or the environment.
6. Design, installation and use of the System shall be in strict conformance with this Approval, the DEP's design guidance and specifications and 310 CMR 15.000, subject to the exceptions allowed in this Approval.

III. Special Conditions applicable to the System Owner/Operator

1. The System is approved for the treatment and disposal of sanitary sewage only. Any wastes that are non-sanitary sewage generated or used at the facility served by the System shall not be introduced into the System and shall be lawfully disposed of.
2. Maintenance agreement:
 - i. Throughout its life, the System shall be under a maintenance agreement. No maintenance agreement shall be for less than one year.
 - ii. No System shall be used until an operation and maintenance agreement and contingency plan are approved by the local approving authority which:
 - provides for the contracting of a person or firm competent in providing services consistent with the System's specifications and the operation and maintenance requirements specified by the design engineer and those specified by the Department;
 - contains procedures for notification to the local board of health and the Department within 24 hours of a System failure, malfunction or alarm event and for corrective measures to be taken immediately.
 - provides the name of the operator, which must be a Massachusetts certified operator or operators if one is required by 257 CMR 2.00, that will operate and monitor the System. The operator must maintain the System at least every three months and anytime there is an alarm event. The provisions of 314 CMR 12.00 are incorporated herein and apply to the maintenance and operation of the System; provided, however, that DEP approval is not required for the operation agreement.
 - iii. For a System with a design flow of less than 2,000 gallons per day, the inspection required by 310 CMR 15.202 (4) (i) is not applicable to a System designed, installed and maintained in compliance with this Approval.
3. The owner shall submit to the Department a copy of the written approval of the local approving authority within 30 days of the date of issuance of their approval. For a System with a design flow of less than 2,000 gallons per day, DEP approval, as specified in 310 CMR 15.202 (5), is not required.
4. Prior to use of the System, the owner of the System shall submit to the Department the name and address of the operator or operators that will operate the System. Every time the operator or operators are changed, the owner shall notify the Department and the local approving authority in writing within seven days of such change.
5. Effluent from Systems that will not be located in Nitrogen Sensitive Areas, as defined in 310 CMR 15.215, shall be monitored quarterly. At a minimum, the following parameters shall be monitored: pH, BOD₅, and TSS. Every time the System is monitored, the water meter reading also shall be recorded. All monitoring data shall be submitted to the Department by January 31 of each year for the previous calendar year. After one year of monitoring and reporting and at the request of the owner/operator, the Department may reduce or eliminate these monitoring and reporting requirements. Monitoring as specified in 310 CMR 15.202 (4) (c) is not required.
6. Systems located in Nitrogen Sensitive Areas, as defined in 310 CMR 15.215, shall be monitored in accordance with 310 CMR 15.202 (4) (c). Every time the System is monitored, the water meter reading also shall be recorded. All monitoring data shall be submitted to the Department by January 31 of each year for the previous calendar year.

7. When a sanitary sewer connection becomes feasible, within 60 days of such feasibility, the owner/operator of the System shall obtain necessary permits and connect the facility served by the System to the sewer, shall abandon the System in compliance with 310 CMR 15.354, unless a later time is allowed, in writing, by the Department, and shall in writing notify the Department of the abandonment.
8. The owner/operator of the System shall at all times properly operate and maintain the System.
9. The owner/operator shall furnish the Department, within a reasonable time, any information that the Department may request regarding the operation and performance of the System.
10. The owner of a facility served by the System shall provide a copy of this Approval, prior to the signing of a purchase and sale agreement for the facility served by the System or any portion thereof, to any new owner.

IV. Reporting

All notices and documents required to be submitted to the Department shall be submitted to:

Director
Watershed Permitting Program
Department of Environmental Protection
One Winter Street - 6th floor
Boston, Massachusetts 02108

V. Rights of the Department

The Department may suspend, modify or revoke this Approval for cause, including, but not limited to, noncompliance with the terms of this Approval, non-payment of any annual compliance assurance fee, for obtaining the Approval by misrepresentation or failure to disclose fully all relevant facts or any change in or discovery of conditions that would constitute grounds for discontinuance of the Approval, or as necessary for the protection of public health, safety, welfare, or the environment, and as authorized by applicable law. The Department reserves its rights to take any enforcement action authorized by law with respect to this Approval and/or the System against the owner, or operator of the System, and/or the designer.

VI. Expiration date

Notwithstanding the expiration date of this Approval, any System installed prior to the expiration date of this Approval, and approved, installed and maintained in compliance with this Approval (as it may be modified) and 310 CMR 15.000, may remain in use, unless the Department, the local approval authority, or a court requires the System to be modified or removed, or requires discharges to the System to cease.

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